Reinforcement Unit for Reinforcing a Footing Element when Laying Pile Foundations with a Foundation Pile, and Method for Placing a Foundation Pile and Reinforcement of a Footing Element

Field of the Invention

The present invention concerns a reinforcement unit for reinforcing a footing element when laying pile foundations with a foundation pile with at least one through-going longitudinal cavity, said reinforcement unit includes a number of shaped and articulated reinforcement members that are pivotally connected to a centrally arranged, annular element, so that the reinforcement unit has a folded mounting position and an extended position of use, and that the reinforcement unit is connected to the foundation pile by one or more tension members.

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The invention also concerns a method for placing a foundation pile and reinforcing a footing element with a reinforcement unit.

Background of the Invention

By founding large constructions as e.g. houses, walls, tower elements, and similar building structures, typically a foundation supported by a number of foundation piles is used, where the piles are placed in the ground for supporting the foundation and for absorbing the compressing and tensile forces caused by the constructions due to their dead weight and wind load.

For absorbing the compressive forces, typically smooth foundation piles are used that are driven down into the earth until they hit a firm substratum. This implies that in some places, many meters of foundation pile is to be used before the bottom reaches a firm bed. Therefore, it may be a very expensive way of founding a building construction on.

By founding in areas where earth surveys show that there is far down to a firm bed, another type of foundation pile is used, where the foundation pile is provided at its lower end with a footing element having a diameter larger than the diameter of the foundation pile itself. This means that the foundation pile is provided a large area over which the pressure is distributed, and that the footing element makes it more difficult